Security in Retirement

SERIES

in partnership with

CENTER *for* RETIREMENT RESEARCH *at* BOSTON COLLEGE

JACKSON®

RESEARCH, ANALYSIS AND INSIGHTS ON ADDRESSING

Market Risk

WORKING PAPER 02

Part four of Jackson's Security in Retirement Series conducted in partnership with the Center for Retirement Research at Boston College

Part 4: Jackson National/Greenwald Research/CRR Project

What Stock Allocations Do Advisors Recommend and How Does It Impact Their Clients?

By Jean-Pierre Aubry and Yimeng Yin

Working Paper (2 of 2)

Both authors are with the Center for Retirement Research at Boston College (CRR). Jean-Pierre Aubry is associate director of retirement plans and finance. Yimeng Yin is a research economist.
The CRR gratefully acknowledges Jackson National Life Insurance Company for supporting this research and the helpful insights provided by Greenwald Research. Any opinions expressed herein are those of the authors and do not necessarily represent the views of the Jackson National Life Insurance Company, Greenwald Research, or Boston College. Greenwald Research, the CRR, Jean-Pierre Aubry, and Yimeng Yin are not affiliated with Jackson National Life Distributors LLC.

Introduction

Market risk is a crucial consideration for those relying on financial assets as a major source of support in retirement. Retirement investors often have misperceptions about asset returns and limited knowledge about financial markets, potentially jeopardizing their long-term security. The role of financial advisors is to guide investors through their asset allocation decisions by helping them align their portfolios with their risk preferences and risk capacities.

Despite the importance of this advisor-client relationship, the literature remains relatively unsettled regarding the actual impact financial advisors have on households' portfolio choices. More specifically, a significant knowledge gap remains regarding advisors' approach to constructing portfolio recommendations and the extent to which these professionals affect their clients' views on market risk. This paper addresses these knowledge gaps by analyzing data from two new surveys of financial advisors and retirement investors. First, it documents the stock allocation that advisors typically recommend to retirement investors and how those recommendations vary based on client and advisor characteristics. Then, it explores the extent to which advisors' recommendations influence clients' risk appetite in ways that support retirement security.

The paper proceeds as follows. The first section briefly reviews prior studies on advisors' role in investors' portfolio decisions and financial planning. The second section describes data from the two surveys. The third section presents results on advisor recommendations and discusses the implications for clients' retirement security. The final section concludes that – while advisors do tailor their recommendations to clients' risk tolerance (but not the composition of their retirement income) – their recommended stock allocations for clients with average risk tolerance tend to be higher than desired by investors. But, this advice (even if potentially motivated by an advisor's desire for larger asset-based fees) is likely beneficial for many investors, as it reflects a better assessment of market risks and returns.

Background

Many households with meaningful financial assets rely on investment professionals. Ideally, an advisor should help individuals find the appropriate level of risk exposure by educating them about the risks and returns of investing; eliciting their risk tolerance preferences; lowering the costs of market participation; and helping them consider potentially relevant factors

such as bequests, late-life health costs, and using the house as an asset. Prior research has found that while advisors do influence their clients to some extent, the evidence is mixed on the ultimate impact of financial advice on portfolio choices and investment outcomes.

A number of studies have examined how financial advisors may help their clients make better investment decisions and avoid mistakes. Advisors could help clients manage risks by diversifying their portfolios (Kramer 2012; Goetzmann and Kumar 2008; French and Poterba 1991; Grinblatt and Keloharju 2001; and Shapira and Venezia 2001) or reducing risks during financial downturns (Liu, Finke, and Blanchett 2024). Moreover, financial professionals' guidance can be especially beneficial to clients with lower financial literacy. Von Gaudecker (2015) examines the interaction of financial literacy and financial advice and finds that households that seek financial advice achieve similar investment outcomes regardless of their financial literacy, while lower financial literacy absent advice is associated with insufficient diversification and poorer investment performance.

Prior studies also identified various limitations of financial advisors' influence on their clients. Using a unique Canadian dataset, Foerster et al. (2017) find that financial advisors exert substantial influence over their clients' asset allocation, but provide limited customizations. In their data, clients' observable characteristics jointly explain only 12 percent of the variation in their share of risky assets, while advisor fixed effects explain 22 percent of the variation. Although less-skilled investors generally benefit more from working with financial advisors, Hackethal, Haliassos, and Jappelli (2012) find that advisors are more likely to work with investors who are wealthier, older, and more experienced.

Although some evidence for positive impacts of advisors has been found, research also highlights important factors that may prevent advisors from providing advice in their clients' best interest. First, financial advisors may fall prey to the same pitfalls as individual investors, hindering their ability to correct their clients' misperceptions. Based on a large sample of Canadian financial advisors, Linnainmaa, Melzer, and Previtero (2021) find that advisors trade frequently, chase returns, prefer expensive and actively managed funds, and under-diversify. Importantly, the research also finds that advisors' returns are similar to their clients', that advisors adhere personally to the investment advice that they give their clients, and that advisors continue these patterns even after they leave the industry. Second, financial advisors may react to the financial incentive embedded in their compensation structure by recommending high-fee

products or investments that do not necessarily result in superior net returns, a common theme repeatedly found in studies on the behavior of financial advisors (Hackethal, Haliassos, and Jappelli 2012; Mullainathan, Noeth, and Schoar 2012; Chalmers and Reuter 2020; and Kramer 2012).

In short, the literature is still relatively unsettled regarding what impact financial advisors have on households' portfolio choices.

Data

To better understand the practices of financial advisors and their influence on clients, this analysis uses two new surveys, one on advisors and one on investors – administered by Greenwald Research in mid-2024.

The advisor survey questioned 400 financial advisors with at least three years of experience, $30 million in assets under management, and 75 clients (of whom at least 40 percent are ages 50+). The survey first solicits basic information about each advisor's practice – whether they work for a Registered Investment Advisor (RIA), the number, age, and wealth of clients they serve, the total assets they have under management, and the advisor's compensation structure. The survey also inquires about the age and wealth distribution of each advisor's client base (see Appendix A for a summary of the basic characteristics and client base of the advisors in the survey). In addition, the survey asks about each advisor's beliefs regarding the riskiness of various asset classes, their approach to communicating risk and providing financial advice, their view on the level of risk-taking among their clients when they initially meet, and asset allocation recommendations for hypothetical clients.

The investor survey questioned 1,016 retirement investors ages 48-78 with at least $100,000 in total investable assets. To focus on those most reliant on these assets for retirement, the survey deliberately under-sampled those with a defined benefit (DB) plan.[1] The survey begins with basic demographic and financial information – such as the investor's age, marital status, total financial assets, and homeownership – and then asks about the respondent's risk

[1] Of the 1,016 respondents to the investor survey, 897 – 582 retirees and 315 near-retirees – have no DB plan. Sampling weights are used in the survey to make the results match the population. Results presented in this paper are based on respondents without DB coverage, but including those with DB plans yields very similar results and does not affect the conclusions.

preferences, beliefs, and portfolio choices.[2] Two key types of questions for this analysis are: 1) the respondents' desired asset allocation, which can be compared with the recommended allocation from the advisor survey; and 2) whether they have ever worked with an advisor and, if so, whether it altered their appetite for risk.[3]

While the two surveys are not explicitly linked – that is, advisors cannot be matched with investors – weighting the responses to the advisor survey by the number of clients ages 50 or over allows the analysis of the advisor survey to better reflect the experience of the investor-survey population for comparison purposes.

Methodology

Data from both surveys are then used to investigate advisors' recommended asset allocations and to explore the impact of these recommendations on investors.

What Drives Advisors' Recommendations?

To understand what drives advisor recommendations, the analysis examines their recommended equity allocations for three hypothetical clients. Specifically, the advisor survey asks them to provide recommendations for: 1) a baseline client who is a 65-year-old retired couple with moderate risk tolerance; 2) a client that matches the baseline except for having low risk tolerance; and 3) a client that matches the baseline except for having a larger share of financial wealth in the form of guaranteed lifetime income. The full characteristics for each hypothetical client are described below:[4]

- *Baseline client.* A married couple who are both age 65, retired, and in good health. They have:
    - investable assets of $350,000;
    - $500,000 of equity in their home and no outstanding mortgage;

[2] The demographic and wealth profiles of the respondents in the investor survey are broadly consistent with those from other large household surveys such as the *Health and Retirement Study* and the *Survey of Consumer Finances* (see Aubry and Yin (2025)).

[3] Prior research suggests that roughly 50 percent of U.S. households work with a financial advisor. But, data from the investor survey suggest that 68 percent of near-retirees and 75 percent of retirees have worked with an advisor. The higher percentages in the investor survey likely reflect the fact that the sample is older and wealthier than the national average.

[4] See Appendix B for the full questions as they appear in the survey.

- Social Security income of $2,000 a month, and no pension income;
- moderate investment risk tolerance;
- target spending of $4,500 per month; and
- no plan to leave any inheritance.

- *Client with lower risk tolerance.* A married couple who has *low* risk tolerance and is otherwise identical to the baseline client.
- *Client with a lower level of investable assets, but some traditional pension income.* A married couple who has investable assets of $275,000 and a monthly pension income of $1,000 in addition to their Social Security benefits. Otherwise, the couple is identical to the baseline client.[5]

To investigate the extent to which advisors tailor their recommendations to their clients' risk preferences and the composition of their retirement income, the analysis compares the recommendations across the three hypothetical clients.[6]

To investigate how recommendations might be influenced by various aspects of the advisors' practice, the study uses OLS regression analysis in which the independent variable is each advisor's recommendation, and the dependent variables are the following advisor-related factors.

- *Advisor's compensation structure,* measured by the share of total compensation derived from percentage-of-asset fees. Prior research suggests that having a larger share of such compensation will be associated with a higher recommended stock allocation.
- *Stock risk premium,* calculated as the difference between the assumed long-term returns of stocks and bonds reported by the advisor. A higher assumed stock risk premium is expected to increase the recommended allocation to stocks.

[5] Note that the couple's investable assets combined with the actuarial present value of the monthly pension income of $1,000 exceeds $350,000, suggesting they are wealthier than the baseline couple. Empirically, the evidence on the relationship between wealth and the share of financial assets invested in risky assets is mixed. Wachter and Yogo (2010) and Heaton and Lucas (2000) find that the share in risky assets increases with wealth, while Brunnermeier and Nagel (2008) and Chiappori and Paiella (2011) find that the risky share of liquid wealth is flat across the wealth distribution.

[6] Lifetime income is expected to crowd out an investor's demand for less risky assets such as bonds, increasing the share of equity in the remaining liquid wealth. See Horneff, Maurer, and Stamos (2008).

- *Perceived riskiness of stocks,* measured by whether the advisor rates stocks higher than 4 on a 1-7 risk scale. The advisor's perceived riskiness of stocks is expected to be negatively associated with the recommended allocation to stocks.
- *Type of advisor.* We include a dummy variable indicating whether the advisor is an RIA, with being a non-RIA broker dealer as the base level, and interact their RIA status with the compensation structure variable described above. Both RIAs and broker dealers, to some extent, operate under a requirement to act in their clients' best interest. The RIA standard is more comprehensive, as the activities of broker dealers do not always fall under the "best interest" requirement. While it is not clear in what direction being an RIA would push recommendations in isolation, the more comprehensive requirement of RIA is expected to weaken the association, if any, between advisors' compensation structure and their advice.
- *Income strategies*. Income strategies generally refer to approaches used by advisors to align clients' investment portfolio with their spending goals during retirement. The survey asks advisors to report the proportion of their retired clients with whom they use the following strategies to manage their investment:
    - "Total return": implements one main asset allocation across all the client's accounts and relies on all facets of investment return (dividends, interest, capital gains, and principal) to finance a pre-determined monthly withdrawal amount.
    - "Bucket" or "time segmentation": divides the client's investable assets into categories, based on when – and for what purpose – the money is to be spent.
    - "Floor": seeks to fund essential expenses through vehicles that provide income that is guaranteed for life, such as Social Security, pensions, and annuities.

  A key difference between these strategies pertains to the spending goals used as the starting point of the recommendations. A greater emphasis on securing basic spending may lead to more conservative portfolio recommendations. For each strategy, we include a dummy variable measuring the extent to which an advisor tends to use it, which equals 1 if the advisor uses the strategy for more than 25 percent of their clients.

How Do Advisors' Recommendations Impact Clients?

This portion of the analysis starts by comparing recommended stock allocations to investors' desired and actual allocations. An ideal dataset would include information on the recommended allocation to each investor, as well as data on each investor's desired and actual asset allocation. But no survey – including the recent Greenwald surveys – contains all three measures together. So, the analysis instead compares *recommended* stock allocations from the advisor survey to investors' *desired* stock allocation in the investor survey, and to *actual* allocations reported in the *Health and Retirement Study* (HRS), a large household survey. Then, using data from the new investor survey, the analysis documents the share of retirement investors who believe working with an advisor has influenced their desired risk level.

The final question addressed is whether advisor recommendations are beneficial. The first step is to see whether advisors are better informed than investors about market risks and returns. The second step involves comparing advisor recommendations to the stock allocation prescribed in Morningstar's target date glide paths (specifically, the Lifetime Allocation Indexes) to see whether the recommendations align with the portfolio choice of well-informed rational investors within the framework of lifecycle portfolio choice models.[7]

Results

This section presents the results of the analyses described above regarding financial advisors' recommendations and their impact on retirement investors.

What Do Advisors Typically Recommend?

Table 1 shows, for each of the three hypothetical clients, the average recommended stock allocation provided by advisors along with its standard deviation and the share of advisors recommending no stock holding to that type of client. The average recommendations for the baseline client and the client with lower risk tolerance are 48 percent and 30 percent respectively (the difference is statistically significant with p-value < 0.001), suggesting that clients' risk

[7] Asset allocations of Morningstar glide paths are obtained from Morningstar (2024a, b, and c). See Morningstar (2015) for an overview of the underlying methodology.

tolerance levels are a critical consideration for advisors when providing asset allocation recommendations.[8]

The average recommendation for the client with more guaranteed income is a surprising 44 percent, which is slightly lower than the baseline scenario (the difference is statistically significant with p-value < 0.001) even though guaranteed income is expected to crowd out an investor's bond allocation and thus increase the allocation to stocks in their remaining liquid wealth. This finding warrants future research to investigate why advisors do not seem to account for clients' existing guaranteed lifetime income the way suggested by economic theory when providing asset allocation recommendations.

What Explains the Variation in Recommended Stock Allocations Across Advisors?

A closer look at advisors' recommendations reveals significant variation across advisors – the recommended stock allocation for the baseline client has a standard deviation of 18 percentage points. A shift in equity allocation of this magnitude would have a substantial impact on retirement planning; thus, it is important to understand what factors might explain the wide range of recommendations across advisors for the same client.

Table 2 presents the results of the regression that relates advisors' recommended stock allocation for the baseline client to various aspects of the advisors' practice, including assumptions and perceptions on stock returns, compensation structure, whether practicing as an RIA, and frequently used income strategies. The key finding is that the higher the share of the advisor's compensation derived from percentage-of-asset fees, the higher the recommended allocation to stocks under the baseline scenario.[9] The type of commonly used income strategy also matters – in particular, advisors who frequently use the total return strategy recommend higher stock allocations, while those who frequently use the floor strategy recommend lower stock allocations, likely reflecting a higher priority given to securing essential spending.[10]

[8] This result is consistent with the responses to a question in the advisor survey about topics advisors most commonly discuss with their clients, which show that advisors spend most of their time discussing the proper asset allocation for the risk preference of their clients.

[9] When the independent variable is the percent difference between the recommended allocation for the baseline client and the recommended allocation for the low-risk-tolerance client, the only significant factor is the advisor compensation. The higher the share of the advisor's compensation that is derived from percentage-of-asset fees, the smaller the reduction in the recommended stock allocation for the low-risk-tolerance client.

[10] The results are robust to changing the threshold used to define frequently used strategies and including more controls for the overall profiles of clients, such as the average wealth and average age of the advisor's client base.

Interestingly, however, neither their beliefs about the riskiness of stocks, nor the risk premium for stocks in their financial models, appear to matter. Also, whether the advisor works for an RIA or not does not seem to have any direct impact on their recommendations or affect the impact of their compensation structure on recommendations.[11]

How Do Financial Advisors' Recommendations Impact Their Clients?

The analysis starts by comparing advisors' recommended stock allocations in the advisor survey to the investors' desired allocations in the investor survey. Table 3 shows that – on average – the recommended allocations are higher than the desired allocations for investors with average risk tolerance (p-value < 0.001), but aligned for those with low risk tolerance (the difference is insignificant with a p-value = 0.43).

The discrepancy between advisors' recommendations and investors' desired stock allocations suggests that advisors tend to advise their clients – at least those with moderate risk tolerance – to increase their stock allocations. This implication is consistent with the fact that *actual* stock allocations for investors are much closer to advisors' recommended allocations than to investors' desired allocations (see Table 4).[12] This interpretation is also supported by what investors say directly about working with an advisor. Table 5 shows that 33 percent of retirement investors who work with an advisor believe that doing so has changed their risk appetite; among this group, about two-thirds say it has increased their risk appetite rather than decreased it (20 percent vs. 13 percent).[13]

Given that advisors do impact some of their clients' appetite for risk, the natural follow-on question is whether that impact improves their clients' retirement security. Two pieces of evidence support the idea that advisor recommendations do, broadly, help. First, comparing data from the investor and advisor surveys suggest that advisors are better-informed about financial

[11] This result is robust to distinguishing between RIAs with and without a formal affiliation by using separate dummy variables.

[12] This result is also consistent with Linnainmaa et al. (2019), who find plausibly causal evidence that advisors increase clients' willingness to take financial risks.

[13] Interestingly, comparing data from the investor and advisor surveys suggests that advisors are affecting slightly more than half of the clients that they think need to change their risk exposure. While 33 percent of retirement investors believe working with an advisor has changed their appetite for risk, advisors believe 61 percent of their new clients are taking either too much or too little risk. One reason for advisors' ultimate effectiveness is the way that they communicate risk to their clients. Appendix C summarizes data from the investor and advisor surveys on the various approaches that financial advisors commonly employ to communicate investment risk to their clients.

markets and retirement planning than their clients (see Appendix D).[14] For example, data from the two surveys show that advisors – on average – possess a more rational view of the riskiness of stocks versus bonds, and better understand the importance of market risk timing as it relates to overall retirement security. One would expect retirement investors to benefit from advisors' greater knowledge and expertise.[15]

Second, advisors' average recommendations look quite similar to the stock allocations prescribed by target date funds. For example, advisors' recommended allocations for hypothetical clients with moderate and lower risk tolerance (48 and 30 percent) match the stock allocations of the moderate and conservative variants of the Morningstar Lifetime Allocation Index (48 percent and 32 percent, respectively) (see Figure 1).[16] Target date funds are designed to reflect the optimal asset allocation that economic and finance theory would predict for a rational investor within the lifecycle-model framework. One would expect retirement investors to benefit from advisor recommendations that align broadly with optimal allocations based on long-standing principles of economic and finance theory.

Conclusion

Financial advisors play a vital role in guiding retirement investors through complex investment decisions and helping them achieve financial sustainability throughout their retirement years. A key aspect of this guidance involves aligning investment portfolios with clients' risk preferences and risk capacities – a practice that is critical in both the wealth accumulation and decumulation phases.

---

[14] Research has shown that individual investors often harbor misperceptions about financial markets and retirement, such as underestimating the potential return – and overestimating the potential risk – of equities relative to historical data. See Kézdi and Willis (2008), Hou (2020), and Goetzmann et al. (2016).

[15] Research has found that increased financial literacy is usually associated with a higher risk tolerance and stronger tendency to invest in risky assets (e.g. Hermansson and Jonsson 2021; Bannier and Neubert 2016; and Dimmock et al. 2016). Empirical evidence also suggests that positive expectations about the stock market result in greater stock ownership (Dominitz and Manski 2007 and Beutel and Weber 2022). Aubry and Yin (2025) also find that positive expectations about the stock market result in greater desired stock allocation.

[16] Importantly, the model-based asset allocations in TDFs are not without caveat. First, the results of lifecycle portfolio choice models depend on model specifications and risk factors included. For example, incorporating more nuanced aspects of risk aversion and considerations such as bequest motives and health-related risks may lower the resulting optimal allocation to stocks. Second, TDF glide paths are generally developed for investors with average characteristics and are thus not sufficiently customized for individual investors. If financial advisors follow a similar methodology when giving recommendations, they may fall prey to the same issues. See Gomes (2020) and Gomes, Haliassos, and Ramadorai (2021) for a comprehensive review of the literature on lifecycle portfolio choice models.

Despite the prevalence of financial advisors, the academic literature remains relatively unsettled regarding advisors' impact on households' portfolio choices. More specifically, a significant knowledge gap remains regarding advisors' approach to portfolio recommendations and the extent to which they affect their clients' views on market risk.

This analysis used two new surveys of financial advisors and retirement investors to assess advisors' portfolio recommendations and explore their influence on clients' risk appetite in ways that support retirement security. The results show that – while advisors do tailor their recommendations to clients' risk tolerance (but, not the composition of their retirement income) – their recommended stock allocations for those with average risk tolerance tend to be higher than what investors with average risk tolerance desire. But, this outcome is likely beneficial for many investors due to the more realistic assessment of risks and returns of advisors (even if potentially motivated by advisors' desire for larger asset-based fees).

References

Aubry, Jean-Pierre and Yimeng Yin. 2025. "Do Desired Stock Allocations Differ From Actual Holdings?" Working Paper. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Bannier, Christina E. and Milena Neubert. 2016. "Gender Differences in Financial Risk Taking: The Role of Financial Literacy and Risk Tolerance." *Economics Letters* 145: 130-135.

Beutel, Johannes and Michael Weber. 2022. "Beliefs and Portfolios: Causal Evidence." Research Paper 22-08. Chicago, IL: The University of Chicago, Booth School of Business.

Brunnermeier, Markus and Stefan Nagel. 2008. "Do Wealth Fluctuations Generate Time-Varying Risk Aversion? Micro-Evidence On Individuals' Asset Allocation." *American Economic Review* 98(3): 713-736.

Chalmers, John and Jonathan Reuter. 2020. "Is Conflicted Investment Advice Better than No Advice?" *Journal of Financial Economics* 138(2): 366-387.

Chiappori, Pierre-André and Monica Paiella. 2011. "Relative Risk Aversion Is Constant: Evidence From Panel Data." *Journal of European Economic Association* 9(6): 1021-1052.

Damodaran, Aswath. *Historical Returns on Stocks, Bonds and Bills: 1928-2023.* New York, NY: New York University, Stern School of Business.

Dimmock, Stephen G., Roy Kouwenberg, Olivia S. Mitchell, and Kim Peijnenburg. 2016. "Ambiguity Aversion and Household Portfolio Choice Puzzles: Empirical Evidence." *Journal of Financial Economics* 119(3): 559-577.

Dominitz, Jeff and Charles F. Manski. 2007. "Expected Equity Returns and Portfolio Choice: Evidence from the Health and Retirement Study." *Journal of the European Economic Association* 5(23): 369-379.

French, Kenneth and James Poterba. 1991. "Investor Diversification and International Equity Markets." *The American Economic Review* 81(2): 222-226.

Foerster, Stephen, Juhani T. Linnainmaa, Brian T. Melzer, and Alessandro Previtero. 2017. "Retail Financial Advice: Does One Size Fit All?" *The Journal of Finance* 72(4): 1441-1482.

Goetzmann, William N. and Alok Kumar. 2008. "Equity Portfolio Diversification." *Review of Finance* 12(3): 433-463.

Goetzmann, William N., Dasol Kim, and Robert J. Shiller. 2016. “Crash Beliefs From Investor Surveys.” Working Paper 22143. Cambridge, MA: National Bureau of Economic Research.

Gomes, Francisco. 2020. “Portfolio Choice Over the Life Cycle: A Survey.” *Annual Review of Financial Economics* 12(12): 277-304.

Gomes, Francisco, Michael Haliassos, and Tarun Ramadorai. 2021. “Household Finance.” *Journal of Economic Literature* 59(3): 919-1000.

Grinblatt, Mark and Matti Keloharju. 2001. “How Distance, Language, and Culture Influence Stockholdings and Trades.” *The Journal of Finance* 56(3): 1053-1073.

Hackethal, Andreas, Michael Haliassos, and Tullio Jappelli. 2012. “Financial Advisors: A Case of Babysitters?” *Journal of Banking & Finance* 36(2): 509-524.

Heaton, John and Deborah Lucas. 2000. “Portfolio Choice and Asset Prices: The Importance of Entrepreneurial Risk.” *The Journal of Finance* 55(3): 1163-1198.

Hermansson, Cecilia and Sara Jonsson. 2021. “The Impact of Financial Literacy and Financial Interest on Risk Tolerance.” *Journal of Behavioral and Experimental Finance* 29: 100450.

Horneff, Wolfram J., Raimond H. Maurer, and Michael Z. Stamos. 2008. “Life-Cycle Asset Allocation with Annuity Markets.” *Journal of Economic Dynamics and Control* 32(11): 3590-3612.

Hou, Wenliang. 2020. “How Accurate Are Retirees’ Assessments of Their Retirement Risk?” Working Paper 2020-14. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Kézdi, Gábor and Robert J. Willis. 2008. “Stock Market Expectations and Portfolio Choice of American Households. Preliminary and Incomplete.” Cambridge, MA: National Bureau of Economic Research.

Kotlikoff, Laurence. 2023. “Economics-Based vs Conventional Financial Planning.” *Economics Matters by Laurence Kotlikoff*.

———. 2018. “Economics-Based Versus Conventional Financial Planning.” Jersey City, NJ: *Forbes*.

Kramer, Marc M. 2012. “Financial Advice and Individual Investor Portfolio Performance.” *Financial Management* 41(2): 395-428.

Linnainmaa, Juhani T., Brian T. Melzer, and Alessandro Previtero. 2021. “The Misguided Beliefs of Financial Advisors.” *The Journal of Finance* 76(2): 587-621.

Linnainmaa, Juhani, Brian Melzer, Alessandro Previtero, and Stephen Foerster. 2019. "Financial Advisors and Risk-Taking." Working Paper. Available at: https://www.aleprevitero.com/wp-content/uploads/2021/05/FinancialAdviceRiskTaking_20191115.pdf

Liu, Zhikun, Michael Finke, and David Blanchett. 2024. "Professional Financial Advice and Investor Behavior during the COVID-19 Pandemic." *Financial Planning Review* 7(1): e1172.

Morningstar. 2024a. *Morningstar Lifetime Allocation Indexes Aggressive*. Chicago, IL.

———. 2024b. *Morningstar Lifetime Allocation Indexes Conservative*. Chicago, IL.

———. 2024c. *Morningstar Lifetime Allocation Indexes Moderate*. Chicago, IL.

———. 2015. "Construction Rules for Morningstar Asset Allocation Index Family." Morningstar Methodology Paper. Chicago, IL.

Mullainathan, Sendhil, Markus Noeth, and Antoinette Schoar. 2012. "The Market for Financial Advice: An Audit Study." *SSRN Electronic Journal*.

Shapira, Zur and Itzhak Venezia. 2001. "Patterns of Behavior of Professionally Managed and Independent Investors." *Journal of Banking & Finance* 25(8): 1573-1587.

Von Gaudecker, Hans-Martin. 2015. "How Does Household Portfolio Diversification Vary with Financial Literacy and Financial Advice?" *The Journal of Finance* 70(2): 489-507.

University of Michigan. *Health and Retirement Study,* 2012-2020. Ann Arbor, MI.

U.S. Board of Governors of the Federal Reserve System. *Survey of Consumer Finances,* 1983-2022. Washington, DC.

Wachter, Jessica A. and Motohiro Yogo. 2010. "Why Do Household Portfolio Shares Rise In Wealth?" *The Review of Financial Studies* 23(11): 3929-3965.

Table 1. *Recommended Stock Allocation for Hypothetical Retired Households*

Statistic	Baseline client	Client with low risk tolerance	Client with increased guaranteed lifetime income
Mean	48%	30%	44%
Std. dev.	18	19	20
% no stocks	1	8	2

Note: To reflect the experience most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves.
Source: Authors' calculations from the 2024 Greenwald Research Advisor Survey.

Table 2. *Relationship Between Recommended Stock Allocation and Advisors' Characteristics*

	Recommended stock allocation	
	Coefficient	Std. err.
Assumed risk premium of stocks over bonds in financial models	0.001	0.006
Rates stocks as highly risky	0.006	0.019
Share of compensation from asset mgmt. fees	0.147***	0.050
Registered Investment Advisor (RIA)	-0.024	0.057
RIA × Share of compensation from fees	0.024	0.074
Use the following strategies for more than 25% of clients		
Total return strategy	0.047**	0.022
Bucket strategy	-0.019	0.020
Floor strategy	-0.096***	0.021
Constant	0.380***	0.045
Observations	400	
R-squared	0.16	

Notes: To reflect the responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients aged 50 and older that the advisor serves. ** p<0.05, *** p<0.01.
Source: Authors' calculations from the 2024 Greenwald Research Advisor Survey.

Table 3. *Comparison of Recommended and Desired Allocations*

Statistic	Recommended allocation in Advisor Survey		Investors' desired allocation in Investor Survey	
	Avg. risk tolerance	Low risk tolerance	Avg. risk tolerance	Low risk tolerance
Mean	48%	30%	39%	29%
Std. dev.	18	19	24	22

Notes: To reflect the responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves. The investor survey sample is limited to respondents ages 60-70 who are not covered by a DB plan.
Sources: Authors' calculations from the 2024 Greenwald Research Investor and Advisor Surveys.

Table 4. *Recommended, Desired, and Actual Stock Allocations for Retirement Investors*

Statistic	Advisor recommended	Stocks as a percentage of investable assets	
		Desired in Investor Survey	Actual in HRS 2020
Mean	48%	39%	45%
Std. dev.	18	24	34

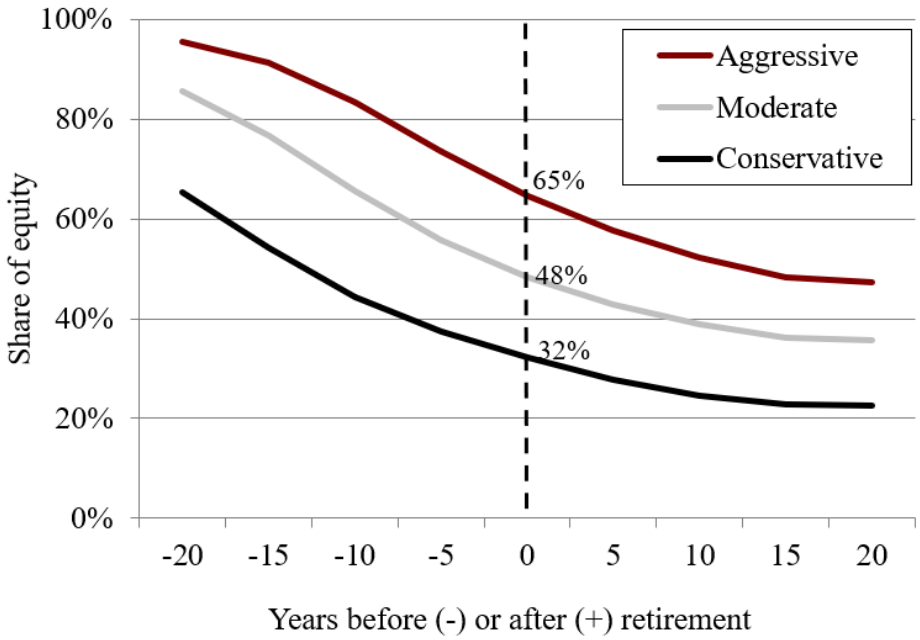
Notes: To reflect the responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves. The investor survey sample is limited to those ages 60-70 with average risk tolerance. The HRS sample is limited to respondents ages 60-70 who are not covered by a DB plan, own more than $100,000 investable assets, and have average overall risk preferences.
Sources: Authors' calculations from the 2024 Greenwald Research Investor and Advisor Surveys and the University of Michigan, *Health and Retirement Study* (HRS) (2020).

Table 5. *Self-Reported Impact of Working with Financial Advisors on Retirement Investors' Appetite for Investment Risk*

Appetite for risk	Share of retirement investors
Increased	20%
No change	67
Decreased	13

Note: The investor survey sample is limited to just those who say that they have worked with an advisor.
Sources: Authors' calculations from the 2024 Greenwald Research Investor and Advisor Surveys.

Figure 1. *Glide Paths of Stock Allocation in Morningstar Lifetime Allocation Indexes*



Sources: Morningstar (2024 a, b, and c).

Appendix A

Table A1. *Characteristics of Advisor's Practice and Client Bases*

Characteristic	Share of respondents
Affiliation of practice	
RIA w/ a broker-dealer affiliation	12%
RIA w/o a broker-dealer affiliation	16
Not an RIA	72
Total assets under management	
$30-$100 million	28
$100-$150 million	22
More than $150 million	51
Number of clients	
75-99 clients	6
100-200 clients	33
More than 200 clients	61
Years working as a financial advisor	
3-5 years	0
6-10 years	7
11-20 years	32
Over 20 years	61
Share of asset management fee in compensation	
< 50%	31
50-90%	51
> 90%	18
Share of clients ages 50+	
40-59%	29
60-79%	55
80% or more	16
Clients' average wealth	
< $500,000	13
$500,000 ~ $1 million	48
> $1 million	39

Source: Authors' calculations from the 2024 Greenwald Research Advisor Survey.

Appendix B. Survey Questions on Advice Given to Hypothetical Clients

The following are descriptions of several hypothetical clients. For each one, please indicate, based on the information provided, how you would allocate their investable assets.

Please note that the first hypothetical client serves as a "base case" and all following clients differ from this "base case" client in certain aspects (the differences are highlighted). ***You can take notes of your allocation for the first client to make answering the following questions easier.***

Q1. **Base case.** Suppose that one of your clients is a married couple: both retired, age 65, and in good health. They have:

- investable assets of $350,000
- $500,000 of equity in their home and no outstanding mortgage.
- Social Security income of $2,000 a month, and no pension income.
- They have MODERATE investment risk tolerance
- Target spending of $4,500 per month.
- No plan to leave any inheritance.

What allocation would you suggest for their investable assets? If you do not think anything should be allocated to a particular asset class, please enter a "0." The total should add up to 100%.

	Investment type	Percent of investable assets
a.	Equities (domestic, international, and/or emerging market) in mutual funds and/or ETFs	
b.	Individual equities (domestic, international, and/or emerging market)	
c.	Bonds (U.S. Treasuries, U.S. taxable bonds, municipal bonds, and/or international bonds) in mutual funds and/or ETFs	
d.	Individual bonds (U.S. Treasuries, U.S. taxable bonds, municipal bonds, and/or international bonds)	
e.	Real Estate Investment Trusts (REITs)	
f.	Cash (i.e., CDs, savings accounts, checking accounts, money market accounts)	
g.	Structured products that provide downside protection such as RILAs and fixed indexed annuities	
h.	Annuities that provide guaranteed lifetime income	
i.	Other (e.g., directly held real estate, physical commodities, private equity)	
	Total percent of investable assets	100%

Q2. **Client with lower risk tolerance.** Suppose that one of your clients is a married couple: both retired, age 65, and in good health. They have:

- investable assets of $350,000
- $500,000 of equity in their home and no outstanding mortgage.
- Social Security income of $2,000 a month, and no pension income.
- ***They have LOW investment risk tolerance***
- Target spending of $4,500 per month.
- No plan to leave any inheritance.

What allocation would you suggest? If you do not think anything should be allocated to a particular asset class, please enter a "0." The total should add up to 100%.

(*Presenting the same table of assets classes as in the base case.*)

Q3. **Client with a lower level of investable assets, but some traditional pension income.** Suppose that one of your clients is a married couple: both retired, age 65, and in good health. They have:

- ***investable assets of $275,000***
- $500,000 of equity in their home and no outstanding mortgage.
- Social Security income of $2,000 a month, and ***$1,000 a month in pension income***.
- They have MODERATE investment risk tolerance
- Target spending of $4,500 per month.
- No plan to leave any inheritance.

What allocation would you suggest? If you do not think anything should be allocated to a particular asset class, please enter a "0." The total should add up to 100%.

(*Presenting the same table of assets classes as in the base case.*)

Appendix C. How Do Financial Advisors Communicate Market Risk to Clients?

Given the differences in recommended and desired allocations, effectively communicating risk to clients is of paramount importance for advisors. First, we summarize advisors' preferred approaches to describing the overall concept of investment risk to their clients (see Table C1). The survey includes a wide range of descriptions of investment risk, including standard risk definitions that describe market risk as the likelihood of losing value, variation in the magnitude of the losses and the timeframe considered, and context-based definitions that relate investment risk to clients' risk tolerance (whether the loss can be psychologically handled) and potential impact on their lifestyle.

More than a third (35 percent) of the advisors in the survey prefer describing market risk as what their clients can psychologically handle rather than losses in asset values. This result may suggest advisors commonly account for their clients' risk tolerance and financial situation when describing risk, consistent with the earlier finding that clients' risk preference is a crucial consideration for providing recommendations. A substantial share of advisors prefer the more traditional methods that describe risk as significant losses in asset values (17 percent not specifying a time period; 14 percent considering an extended time period). Interestingly, only 12 percent of advisors define market risk based on whether their clients' lifestyle would be affected by investment losses.

Table C1. *Distribution of Advisors' Various Approaches to Describing Investment Risk*

Advisors' preferred approach	Share of advisors
The risk of losing more than the client can psychologically handle	35%
The risk of losing significant value, such as 25% or more	17
The risk of losing significant value for an extended period of time	14
The risk of losing so much value that the client's lifestyle will be affected	12
The risk of losing any value for an extended period of time	12
The risk of losing any value at all	5
Something else	4

Note: To reflect the responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves.
Source: Authors' calculations from the 2024 Greenwald Research Advisor Survey.

Although advisors' general descriptions of market risk do not commonly involve spending, a key component of their communication practices is determining a spending goal in retirement for their clients and demonstrating the extent to which the goal can be achieved by alternative investment strategies. The traditional practice typically shows, usually using results from Monte Carlo simulations assuming a certain investment strategy, the probability that a predetermined target spending level can be sustained, or sustainable spending levels under different market scenarios. The vast majority of advisors adopt these approaches when communicating with their clients (see the first three rows of the first column in Table C2).

These common methods of helping retirement investors understand their exposure to risk are criticized by some academics, who advocate an alternative approach that starts by showing clients how much they could afford to spend in retirement if they took no risk in their investment portfolio.[17] From there, retirees could decide whether including some portfolio risk to increase their potential spending was worth it. Results from the advisor survey suggest that just 68 percent of clients are shown this information (see the last row of the first column in Table C2).

The investor survey asks respondents to report whether their advisors use the same set of communication methods discussed above. Interestingly, although the majority of advisors report that they adopt these methods, only 40-50 percent of retirement investors think their advisors use them. This discrepancy suggests potential communication issues between advisors and clients that make a large share of investors not fully appreciate the value of these communication methods.

Table C2. *Distribution of Advisors' Various Approaches to Communicating Risk*

Method for communicating risk	Share of advisors in Advisor Survey	Share of individuals in Investor Survey
The probability of meeting essential expenses	95%	52%
The probability of sustaining their target spending level	95	48
Sustainable spending levels under different market scenarios	86	44
The spending level that could be 100% guaranteed	69	41

Note: To reflect the responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves.
Sources: Authors' calculations from the 2024 Greenwald Research Advisor and Investor Surveys.

[17] See Kotlikoff (2018, 2023).

Appendix D. Do Financial Advisors Have More Realistic Perceptions Of Market Risk Compared To Their Clients?

Both the advisor and investor surveys asked respondents to score the riskiness of six types of investments – stocks, bond funds, directly holding bonds, real estate trusts, directly holding real estate, and directly holding physical commodities – on a scale of 1 to 7. Using these data, we compare the perceived riskiness of stocks relative to bonds among retirement advisors and retirement investors. Additionally, the analysis will compare advisors' and retirement investors' perceptions about "sequence-of-returns" risk, an often-overlooked feature of stock riskiness for retirees who are drawing down their accumulated assets for income. Without any cashflow, return sequences with the same compound average returns over a period always result in the same final asset value regardless of the path of the sequence. In the presence of regular withdrawals from the portfolio, however, returns early in the period have greater effects on future asset values and withdrawal amounts. To test respondents' understanding of sequence-of-returns risk, both the advisor survey and the investor survey include a question about the most impactful period in terms of investment risk during retirement (options include the first 10 years, the last 10 years, the period in between, and timing does not matter).

Table D1 compares the perceived riskiness of stocks relative to that of bonds for advisors and retirement investors. The results show that advisors – compared to investors (with and/or without advisors) – are more likely to think stocks are riskier than bond funds and/or directly holding bonds, suggesting their views of the risk/return profiles of stocks and bonds are generally more consistent with long-term historical return data.[18] In contrast, investors are more wary of the riskiness of bonds, perhaps due to the recent period of rising interest rates, which erodes the value of bonds if sold before maturity. However, directly holding investment-grade or government bonds to maturity generally presents very little risk in nominal terms.[19]

[18] Over the period 1928-2023, the annualized long-term compound return and standard deviation of large-cap stocks (S&P 500) are 9.8 percent and 19.6 percent, compared to 6.7 percent and 7.7 percent for corporate bonds and 4.6 percent and 8.0 percent for 10-year Treasury bonds (Damodaran, 2024). Although stocks do yield greater average annual returns, short-term risk can compound over time and lead to dramatic uncertainty as to the final wealth accumulation outcomes (see Aubry and Yin (2025)).

[19] Investors could also be reacting to the recent bout of inflation, which erodes the value of bonds in real terms.

Table D1. *Perceived Riskiness of Stocks for Retirement Investors and Advisors*

Stock riskiness	Advisors	Investor w/o advisor	Investors w/ advisor
Compared to bond funds, stocks are:			
Riskier	73%	55%	42%
Just as risky	19	36	48
Less risky	8	9	10
Compared to directly holding bonds, stocks are:			
Riskier	86	73	67
Just as risky	8	20	20
Less risky	6	7	12

Note: To reflect the advisor responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients aged 50 and older that the advisor serves.
Sources: Authors' calculations from the 2024 Greenwald Research Investor and Advisor Surveys.

Table D2 compares advisors' and retirement investors' perceptions about "sequence-of-returns" risk in retirement, showing that advisors are much more likely than investors to understand how the timing of returns matters for outcomes. Seventy-five percent of advisors correctly identify investment returns in the first 10 years of retirement as the most crucial to overall retirement security, while only about 40 percent of investors recognize the importance of returns in the early years of retirement. Interestingly, investors working with a financial advisor do not seem to understand sequence-of-returns risk better, suggesting that this concept is not effectively communicated by advisors.

Table D2. *Understanding of Sequence of Returns Risk*

Investment risk	Investor w/o advisor	Investors w/ advisor	Advisors
Most impactful period of return risk			
First 10 years	41%	43%	75%
Between first and last 10 years	10	4	5
Last 10 years	12	9	8
Timing does not mater	38	44	13

Note: To reflect the advisor responses most relevant to near-retirees and retirees, responses in the advisor survey are weighted by the number of clients ages 50+ that the advisor serves.
Sources: Authors' calculations from the 2024 Greenwald Research Investor and Advisor Surveys.

Overall, the survey results support the notion that advisors hold more rational beliefs about stock riskiness than the average investor.

Overall, the survey results indicate that advisors generally maintain a more rational view of the riskiness of stocks and better understand the nuanced implications of market volatility than retirement investors, confirming advisors' potential to guide clients toward more appropriate asset allocations for retirement security.

Jackson, its distributors, and their respective representatives do not provide tax, accounting, or legal advice. Any tax statements contained herein were not intended or written to be used and cannot be used for the purpose of avoiding U.S. federal, state, or local tax penalties. Tax laws are complicated and subject to change. Tax results may depend on each taxpayer's individual set of facts and circumstances. You should rely on your own independent advisors as to any tax, accounting, or legal statements made herein.

This material should be considered educational in nature and does not take into account your particular investment objectives, financial situations, or needs, and is not intended as a recommendation, offer, or solicitation for the purchase or sale of any product, security, or investment strategy.

Annuities are issued by Jackson National Life Insurance Company (Home Office: Lansing, Michigan) and in New York by Jackson National Life Insurance Company of New York (Home Office: Purchase, New York). Variable annuities are distributed by Jackson National Life Distributors LLC, member FINRA. May not be available in all states, and state variations may apply. These products have limitations and restrictions. Discuss them with your financial professional or contact the Company for more information.

Greenwald & Associates, Center for Retirement Research at Boston College, Jean-Pierre Aubry and Yimeng Yin are not affiliated with Jackson National Life Distributors LLC.

Firm and state variations may apply. Additionally, products may not be available in all states.

CMC110066 08/25

JACKSON®